GOALS:

- To offer junior scientists a high-quality interdisciplinary training
- Effective communication of results and methods
- Formulation and management of research projects
- To foster the development of each doctoral student into an independent researcher
- To ensure and develop standards of excellence within the universities doctoral research programmes

DROPIT is embedded in the existing well structured doctoral schools

- GRADUS at the University of Stuttgart
- ISA at the University of Bergamo
- DICAM at the University of Trento

Educational Interdisciplinary Programme

- Core courses (part of local universities’ general educational programme)
- Specialised courses (especially designed for this IRTG)
- Analytical modelling of droplet evaporation
- Introduction to Discontinuous Galerkin methods
- Advanced numerical methods for hyperbolic equations and applications
- Up-scaling of multi-phase flow and transport processes at the interface between porous media and free flow
- Challenges in micro-CT: multiphase flow and improved reconstruction algorithms
- PIV and laser based measurement techniques in sprays
- Modelling of drop heating and evaporation
- Training courses (key-skill training, e.g. management, communication)

Fostering Independence Path

- Ph.D. students are responsible for the planning, budgeting and logistic aspect of the International Summer School (once every three years)
- Organisation of an International Workshop on Droplet Impact Phenomena & Spray Investigations - DIPSi (annually)
- Opportunity to spend six to nine month research visits at the partner university
- Active role in shaping their own research project and in the selection of visiting researchers
- Offering one-to-one mentoring and coaching to each doctoral student (gender-independent) by a selected reference person
- Sustaining young scientists academic career path from doctoral thesis up to appointment procedure as professor by various career counselling offers
- Technology Transfer Initiative (TTI) GmbH of the University of Stuttgart supports students creating their own start-up
- Encouraging promising young researchers to pursue their scientific careers by offering start-up grants for first-time applicants

Ensuring Standards of Excellence

- Invitation of internationally recognized scientists with expertise in topics Ph.D. students are working on (visiting scientist programme)
  ⇒ Promotion of scholarly exchange communication skills
- Attend two international scientific conferences and two DIPSi (Droplet Impact Phenomena & Spray Investigations) workshops during their doctoral studies
- Publish at least one paper in a peer-reviewed journal and two conference papers
- Ph.D. students have to present their scientific progress at the joint annual doctoral meeting of the IRTG
- An advisory board ensures support and feedback on the student’s scientific and professional development already at an early stage of the doctoral education
- A midterm review is planned to provide a critical assessment of the doctoral research work
- Present and communicate research results at the graduate school seminar